**REMARKS**

Applicants note that the Office action indicates that a Notice of References Cited (PTO-892) was to be attached to the action. However, such an attachment was not provided and is not available on PAIR. Applicants request that the Notice of References Cited (PTO-892) be provided with the next communication from the Office in connection with this application.

**Rejection Under 35 U.S.C. § 103(a)**

Applicants respectfully request reconsideration of the rejection of claims 1-33 under 35 U.S.C. § 103(a) as being unpatentable over the combined teachings of U.S. Patent No. 5,070,197 (Chin et al.) and U.S. Patent No. 5,614,468 (Kramer et al.).

Applicants previously discussed and characterized the invention as defined in the original pending claims (1-33) and the art that forms the basis of the rejection in their Letter to the Patent and Trademark Office filed December 21, 2005.

On page 2 of the Office action, the Examiner characterizes the subject matter of claims 1-18 as directed to processes for preparing sodium glyphosate compositions by exothermic batch reaction of particulate glyphosate acid, sodium hydroxide and water. Applicants wish to point out that the invention defined in claim 1 is not limited to batch reaction, but also encompasses continuous reaction processes (See, for example, dependent claim 18).

Applicants again acknowledge the assertion in the sentence bridging pages 3 and 4 of the Office action that the prior art shows processes including reaction of glyphosate acid with certain bases such as sodium and ammonium hydroxide in which the

exothermic heat of reaction is used to drive off water from the reaction mixture to produce a product of low moisture content. **However, applicants' claims are not drawn to an invention of such scope.** In particular, the rejection maintained in the Office action fails to address the all the requirements of the process defined in independent claims 1 and 19, including mixing glyphosate acid, sodium hydroxide in a reactor and adding water to the reaction mass (including the water produced by the reaction of the glyphosate acid and sodium hydroxide) in an amount of from about 10% to about 40% by weight of all materials added to the reactor and using the heat of reaction to partially evaporate the water and form a sodium glyphosate paste having a moisture content of from about 2% to about 20% by weight.

Chin et al. disclose a continuous extrusion process in which a pesticidal Bronsted acid is admixed with a Bronsted base and reacted in an extruder. Glyphosate acid is mentioned among over four dozen other pesticidal Bronsted acids. The most preferred Bronsted bases include NaOH, KOH, $(C_2H_5)_2NH$, $(C_2H_5)_3N$, $(HOC_2H_4)_2NH$ or $(HOC_2H_4)_3N$. The so-called "dry reactive method" disclosed by Chin et al. is performed essentially without the addition of any extraneous solvent (e.g., water) and under conditions where the water of reaction volatilizes and is driven off by the resultant heat of reaction so that a **solid** end product of dry water-soluble or water-dispersible pesticide can be formed in a single step (See, for example, col. 1, lines 52-62; col. 2, lines 14-17; and col. 4, lines 51-53). Thus, in contrast to applicants' claimed process requiring the production of a sodium glyphosate paste, the process of Chin et al. is conducted in a manner to produce a solid product essentially free of moisture and having a residual water content preferably not in excess of 5% by weight or less (See col. 4, lines 39-42).

Given that the stated primary objective of Chin et al. is to form a solid pesticidal salt product (See col. 4, lines 51-53), the reference fails to teach or suggest a process conducted in a manner to form a **paste** product as called for in the instant claims, including addition of a sufficient amount of water to the reaction mass. Although optional water addition to the reaction mixture is mentioned for purposes of serving as a diluent for the Bronsted base, heat sink and/or lubricant (See col. 1, lines 62-67; and col. 4, lines 6-8), Chin et al. teach that it is advisable to first determine whether it is feasible to conduct the reaction in the absence of a heat sink such as water (See col. 4, lines 14-16). If water is added to the reactor, the amount is determined by the exotherm to be controlled, the heat capacity of the water and the amount of water (including water produced by the reaction, if any) to be driven off by the heat of reaction (See col. 4, lines 8-13). Thus, the clear preference and teaching in Chin et al. is that the reaction be performed essentially without the addition of any extraneous water to the reaction mixture and the process be conducted and controlled in a manner so that free water is driven off to an extent sufficient to form a solid end product.

Consistent with this teaching, in the only example of Chin et al. where sodium hydroxide and glyphosate acid were reacted (See Example 2), powdery glyphosate acid and sodium hydroxide were combined in a reactor/extruder to form a water-soluble product without the addition of extraneous water to the reactor/extruder. Thus, the only source of water in Example 2 is the water produced during the reaction. It is not possible to calculate the weight percent of the water of reaction in Example 2 since the relative quantities of glyphosate acid and sodium hydroxide charged to the reactor/extruder and the extent

of reaction are not specified. Nevertheless, even assuming substantially complete equimolar reaction of the glyphosate acid and sodium hydroxide (thereby maximizing the weight percent of water added), the maximum amount of water added to the reaction mass by weight of all the particulate glyphosate acid, sodium hydroxide and water added to the reactor/extruder would be only 8.6% as determined by dividing the molecular weight of water by the sum of molecular weights of glyphosate and sodium hydroxide (18/(169 + 40)).

The proper amount of water addition necessary for formation of a glyphosate salt paste will vary depending upon, among other things, the base utilized in the process. Chin et al. do not disclose or suggest how much water is to be added to the reaction mixture to form a glyphosate salt paste for any of the range of Bronsted bases disclosed as suitable for forming solid glyphosate salts (i.e., those listed in col. 3, lines 25-39). In particular, the reference fails to disclose or suggest a process as called for in the pending claims in which water is added to the reaction mass in an amount from about 10% to about 40% by weight of the particulate glyphosate acid, sodium hydroxide and water added to the reactor and the extent of partial evaporation controlled to form a sodium glyphosate paste having a moisture content of from about 2% to about 20% by weight.

The deficiencies in Chin et al. cannot be overcome by resort to Kramer et al.

As previously noted by applicants, the solid-state process as disclosed by Kramer et al. is limited to a process for the production of a **solid**, free-flowing (i.e., non-caking) and water-soluble **ammonium** glyphosate salt (See, for example, col. 5, lines 20-26). Whatever Kramer et al. may teach about

processes for the production of such ammonium glyphosate salt compositions, the reference does not teach or suggest its suitability to a process for the production of glyphosate salt compositions in general and particularly to the formation of a **sodium** glyphosate **paste** as claimed.

Moreover, the assertion on page 3 of the Office action that one of ordinary skill in the art would be motivated to combine the references "in order to use the metal salt reaction processes of Chin in the continuous process of Kramer et al." is inapposite. As noted on the same page of the Office action, the process for preparing metal salt glyphosate compositions disclosed by Chin et al. is itself a continuous process (See, for example, the Abstract), so resort to Kramer et al. to obtain the advantage of continuous processing is unnecessary. Kramer et al. make reference to Chin et al. and expressly teach away from production of sodium glyphosate compositions as disadvantageous (e.g., much more hygroscopic and less resistant to ambient humidity, more difficult and expensive to make and process and containing a lower concentration of the active glyphosate) as compared to counterpart ammonium glyphosate salt compositions (See col. 4, lines 22-47). The stated purpose of Kramer et al. is to provide "a practical method for producing a dry, water-dispersible water-soluble and appreciably non-hygroscopic ammonium glyphosate composition which is capable of absorbing/adsorbing an exceptionally high level of adjuvants from N-phosphonomethylglycine and relatively inexpensive aqueous ammonium hydroxide on a manufacturing scale at an acceptable cost" (See col. 3, lines 5-15). Thus, substitution of the process for producing sodium glyphosate compositions of Chin et al. into the process of Kramer et al. as proposed in the Office action would vitiate the stated purpose of Kramer et al. of

providing a commercially feasible process for the manufacture of a dry ammonium glyphosate composition as an alternative to the prior art dry sodium glyphosate compositions made in accordance with Chin et al. There can be no suggestion or motivation to make a modification to Kramer et al. that renders the reference unsatisfactory for its intended purpose (See MPEP § 2143.01 (V)).

In view of the above, applicants respectfully maintain that the Office has failed to establish a *prima facie* case of obviousness with respect to independent claims 1 and 19. Dependent claims 2-18 and 20-33 are likewise submitted as patentable for the reasons set forth above and the further features recited therein.

**Obviousness-Type Double Patenting Rejection**

With respect to the rejection of original claims 1-33 under the judicially created doctrine of obviousness-type double patenting based on claims 1-44 of U.S. Patent No. 6,605,568 (Massmann et al.) or claims 1-127 of U.S. Patent No. 6,734,142 (Massmann et al.), further in view of U.S. Patent No. 5,070,197 (Chin, et al.), applicants note that the subject application and U.S. Patent Nos. 6,605,568 and 6,734,142 have been assigned to Monsanto Technology LLC and are commonly owned. Therefore, any obviousness-type double patenting rejection may be overcome by a timely filed terminal disclaimer in compliance with 37 CFR §1.321(c).

However, applicants wish to point out that International Publication No. WO 01/08492, published February 8, 2001, corresponds to U.S. Patent No. 6,605,568 and is prior art with respect to the subject application under 35 U.S.C. §102(b). Accordingly, the disqualification of prior art under 35 U.S.C.

§103(c)/§102(e) with respect to commonly owned subject matter does not apply to the disclosure in International Publication No. WO 01/08492. International Publication No. WO 01/08492 was previously made of record by applicants.

In view of the above, applicants request that the requirement of a terminal disclaimer be deferred until such time allowable subject matter is indicated in the subject application. At that time, a determination can be made as to whether the allowed claims are in conflict and a terminal disclaimer required.

**Conclusion**

Applicants request further examination of the subject application and allowance of the pending claims.

It is believed that no fees are due in connection with this response. However, the Office is hereby authorized to charge any fee deficiency in connection with this response to Deposit Account No. 19-1345.

Respectfully submitted,

Vincent M. Keil, Reg. No. 36,838
SENNIGER POWERS
One Metropolitan Square, 16th Floor
St. Louis, Missouri 63102
(314) 231-5400

VMK/MJV/lam/sxm